

**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Keung, et al.

Examiner: Hai Vo

Serial No.: 09/666,928

Art Unit: 6748

Confirm No.: 6748

Docket: 10188

Filed: September 21, 2000

For: HEAT-SEALABLE MULTI-LAYER  
WHITE OPAQUE FILMMail Stop Non-fee  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**DECLARATION UNDER 37 CFR 1.132**

Sir:

I, Marie-France Nothnagle do hereby declare and state:

1. I am one of the inventors named in U.S. Patent No. 5,691,043 to Keller et al. ("the '043 patent"), which was cited by the Examiner in an Office Action mailed on July 28, 2003 for the above-referenced patent application.

2. I have a bachelors degree and a Masters degree in Biology from Louvain La Neuve University (Universita' Catholique de Louvain). In addition, I have taken a number of courses relating to thermoplastic film technology.

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3. I worked in the Films Division of ExxonMobil Chemical Corporation (formerly Mobil Oil Corporation) for more than nine (9) years from 1989 to 1999. While employed by ExxonMobil, I held a variety of positions in the research and development and manufacturing groups.

4. I have extensive knowledge in the development and manufacture of thermoplastic films and the polymeric materials and additives that are used to form such films.

5. I have read and understood the Office Action mailed on July 28, 2003 in the above-captioned case. I am also familiar with the '043 patent for which I am a named inventor.

6. Page 3, lines 2-4 of the Office Action mailed on July 28, 2003 states that:

"Keller teaches ethylene-propylene-butylene terpolymer having a melting point in the range of about 115°C to 130°C, meeting a value disclosed by Applicants (column 8, lines 1-12 [of the '043 patent])."

7. I have reviewed column 8, lines 1-12 of the '043 patent and disagree with the finding in the Office Action that the '043 patent "teaches ethylene-propylene-butylene terpolymer having a melting point in the range of about 115°C to 130°C." Column 8, lines 1-9 of the '043 patent teaches the use of ethylene-propylene-butylene terpolymers in the skin layer.

8. I have reviewed column 8, lines 10-12 of the '043 patent and found that it refers to

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melting points of "copolymers" not "terpolymers." Column 8, lines 10-12 states:

These copolymers typically have a melt flow rate in the range of about 5 to 10 with a density of about 0.9 and a melting point in the range of about 115° to about 130°C.

(Emphasis added.)

9. The "copolymers" referred to in column 8, lines 10-12 of the '043 patent are disclosed in the paragraph at column 7, lines 58-67 of the '043 patent. These copolymers are not the same as the terpolymers disclosed in the paragraph at column 8, lines 1-9 of the '043 patent.

10. In the '043 patent, we consistently used the term "copolymer" to refer to a thermoplastic produced by the polymerization of two monomers and the term "terpolymer" to refer to a thermoplastic produced by the polymerization of three monomers. I have reviewed the '043 patent and can confirm that the term "copolymer" is not used to refer to a thermoplastic that includes more than two monomers. Therefore, when column 8, lines 10-12 of the '043 patent refers to "copolymers," I can state unequivocally that it does not refer to ethylene-propylene-butylene terpolymers as the Office Action states.

11. The Office Action mailed on July 28, 2003 further states at page 3, lines 5-6 that "Keller also teaches such terpolymers are available from Chisso under the tradename Chisso 7800 or 7700 series (column 7, lines 5-10)." Column 7, lines 5-10 of the '043 patent refers to

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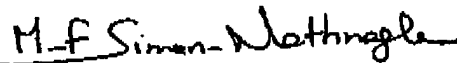
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"terpolymers" manufactured by Chisso. These terpolymers are not the same as the "copolymers" described at column 8, lines 10-12 of the '043 patent.

12. As an inventor of the '043 patent, I can state that the terms "copolymer" and "terpolymer" were not used interchangeably by the inventors. We did not refer to terpolymers as copolymers in the specification for the '043 patent. Accordingly, I do not believe there is any basis for the Office Action stating that the copolymers described at column 8, lines 10-12 are the same as the Chisso terpolymers described at column 7, lines 5-10.

13. I hereby declare that all statements made herein are of my own knowledge and are true, and that all statements made on information and belief are believed to be true; and further that the statements have been made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of any patent issuing on the present invention.

Dated: August 27, 2003



Marie-France Nothnagle

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P.O. Box 1450  
Alexandria, VA 22313-1450**DECLARATION UNDER 37 CFR 1.132**

Sir:

I, Robert A. Migliorini do hereby declare and state:

1. I am one of the inventors named in the above captioned patent application.
2. I have a bachelors degree in Chemical Engineering from Tufts University and a Masters degree in Materials Engineering and a Masters in Business Administration degree from Rochester Institute of Technology. Also, I have taken a number of courses relating to thermoplastic film technology.

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3. I have worked in the Films Division of ExxonMobil Chemical Corporation (formerly Mobil Oil Corporation) for more than fifteen (16) years and have held a variety of positions in the research and development and manufacturing groups. For the past three (3) years, I have worked in the manufacturing group and my current title is Plant Manager.

4. I have extensive knowledge in the development and manufacture of thermoplastic films and the polymeric materials and additives that are used to form such films.

5. I have read and understood the Office Action in the above-captioned case which was mailed on July 28, 2003.

6. I am familiar with the Crimp minimum seal temperature (Crimp MST) and the testing procedure used by ExxonMobil (a copy of ASTM F88 is attached to my previous declaration in this application dated April 18, 2003). Crimp MST is the seal temperature required to provide a minimum seal strength using a controlled sealing procedure. This procedure is described in ASTM F88 and it is the industry standard for testing heat sealable films. To summarize the test procedure, samples of a heat sealable film are sealed at a fixed pressure (20 psi) and varying temperatures and then tested for seal strength. The Crimp MST is the seal temperature required to provide a minimum acceptable seal strength (200 grams/inch). In many

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packaging applications involving plastic films, a lower MST is required for high speed packaging applications. A packaging film with a lower MST permits packaging lines to be run at higher speeds, and hence increased productivity levels. Accordingly, it has been found to be desirable to design a plastic film with a low MST.

7. I disagree with page 3, lines 8-9 of the July 28, 2003 Office Action which states that "the melting point of 126°C is not significantly high compared to a value of 122.5°C disclosed by Applicants."

8. Attached to this Declaration as Exhibit 1 is a graph showing "Crimp Seal MST" versus "DSC Peak Melting Temperature" for various ethylene-propylene-butylene terpolymers, some of which are used in the skin layer of the present invention. I was involved in the testing of the different resins that are plotted on this graph and I know that the test results are accurate and reliable.

9. The graph in Exhibit 1 shows that crimp seal MST increases as the resin melting temperature increases. The graph shows that a resin with a melting temperature of 122.5 °C has a crimp seal MST of about 201 °F and that a resin with a melting temperature of 126 °C has a crimp seal MST of about 209 °F.

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10. In my experience, I have found that lowering the crimp seal MST by only a few degrees is important to customers who purchase oriented polypropylene films for packaging applications. An 8 °F difference in crimp seal MST is important to these customers because, as explained in paragraph 6, it allows packaging equipment to be run at significantly higher speeds which increases productivity. Therefore, a film with a crimp seal MST that is 8 °F lower than a competing film has a significant marketing advantage.

11. I hereby declare that all statements made herein are of my own knowledge and are true, and that all statements made on information and belief are believed to be true; and further that the statements have been made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of any patent issuing on the present invention.

Dated: September 4, 2003

  
Robert A. Migliorini

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OCT 28 2003



FILM CRIMP SEAL MST VERSUS RESIN DSC MELTING TEMPERATURE

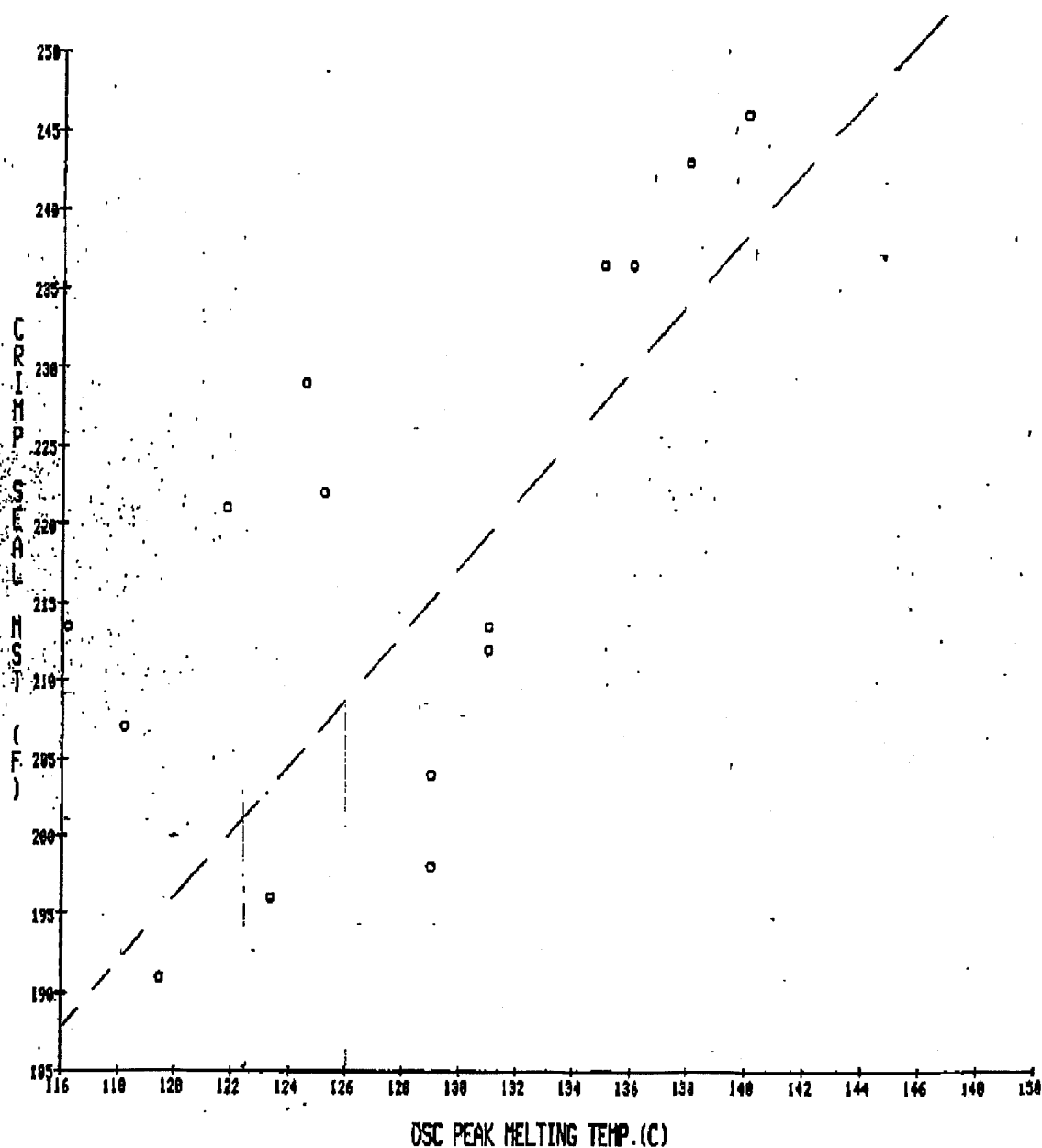


EXHIBIT 1